Extron Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

SYSTEM 5cr - SYSTEM SWITCHER

- Universal display compatibility
- 250 MHz (-3dB) bandwidth
- Variable audio control
- Room control
- Universal projector control
- Five inputs/one output
- IR learning capabilities
- 12 watts/channel audio amplifier
- Multiple mounting configurations
- Remote controllable

SERVICE 3 SUPPORT SOLUTIONS

APPLICATIONS

Extron's System 5c provides an inexpensive solution for input switching, room control and audio control in smaller scale A/V installations, such as conference rooms, work environments and boardrooms that use LCD, DLP or Plasma display devices. By providing projector control, room control and universal compatibility with display devices as well as system audio capabilities, the System 5c performs functions that would normally require up to four different products. The System 5c is a configurable five input, one output switcher that is capable of accepting computer-video signals, composite video and S-video, as well as line-level audio signals. With a video bandwidth of 250 MHz (-3dB), this switcher maintains original signal integrity.

The System 5c has a total of five inputs: three for PC and two for video; all have the ability to amplify and pass through line-level audio. A convenient front panel computer-video input is provided on a female 15-pin HD connector for easy access. This makes it convenient to connect a laptop directly, without accessing the back of the switcher. Each video input is configurable for either composite or S-video signals.

SCP 100 CONTROL PAD

Easy to install and operate, the System 5c provides projector and room control via front panel operation, hard-wired control pad and IR remote control. The switcher's front panel buttons control video and audio input settings, display functions such as power, mute and video modes as well as room controls, such as lowering or raising a display screen or powering lights on or off. These functions are also controllable via the IR 40 remote control and the SCP 100 (System Control Pad) control pads.

A standout feature of the System 5c is its IR learning capabilities. The IR receiver allows much more than just operational remote control of the System 5c. This unique receiver also serves as a way to configure the switcher to communicate with attached display devices due to the System 5c's ability to learn remote control functions. This IR "intelligence" allows for quick and easy configuration as well as universal compatibility with all display devices. By programming display functions such as power, mute and mode–as well as assigning inputs–the System 5c provides transparent operation. It is as easy as connecting a display device and pushing a button.

APPLICATIONS (Cont.)

Two auxiliary ports provide for the connection of the SCP 100 control keypads. These keypads may be mounted in a wall, podium or table and offer the same function controls as the front panel but from a more convenient location. The SCP 100 may be ordered in either grey, black or white to match the room's interior.

The System 5c also provides an internal, 12 watt/channel audio amplifier to allow the designer the choice of using powered or non-powered speakers in the room. Typically, using powered speakers in a room requires the installation of a power outlet by an electrician, which can considerably add to the cost of the installation. There are two ways to output audio from the System 5c. Pre-amp audio levels may be output on a 3.5 mm captive screw connector, or amplified audio may be output on spring loaded depression connectors. The amplified audio output serves as a means to connect non-powered speakers in a room. A unique configuration mode allows the ability to select audio control methods with the System 5c. Audio inputs may be individually leveled and adjusted by one master volume control or volume may be adjusted per input.

The System 5c is housed in a 1U high, standard rack width enclosure. It is rack mountable and comes with special mounting brackets that allow the switcher to be mounted in a rack, to a wall or under a table.

FEATURES

- Bandwidth– The System 5c switcher has a 250 MHz (-3dB) video bandwidth to maintain signal integrity.
- Room control– Room lighting, screen settings and other device operation can be controlled by the System 5c via IR remote, remote keypad (SCP 100) or front panel.
- Universal projector control– The System 5c provides universal projector control, via IR learning capabilities, allowing it to operate with any IR controllable display device.
- Five inputs/One output– The System 5c has three computer inputs (one on the front panel for easy access) and two inputs for either composite video or S-video. Each input can include line-level audio.
- Learning remote– Remote control of the System 5c goes beyond simple operational features. The IR receiver is a two-way device capable of learning new functions and quickly configuring inputs.
- Internal audio amplifier– A built-in 12 watt/channel audio amplifier allows powered or non-powered speakers to be used with the System 5c.

SPECIFICATIONS

Video input
- Number/type ..... 3 RGBHV/RGBS/RGsB computer video
  2 S-video or composite video
- Connectors ..... 1 15-pin HD female (RGB computer video)
  2 x 5 BNC female (RGB computer video)
  2 x 2 BNC female (S-video or composite video)
- Nominal level(s) ..... Analog — 0.3 to 1.45V p-p
- Maximum level(s) ..... Analog — 2.0V p-p
- Impedance ..... 75 ohms
- Horizontal frequency ..... 15 kHz to 150 kHz
- Vertical frequency..... 30 Hz to 150 Hz
- Return loss ..... -45dB @ 5 MHz
- Maximum DC offset 1.5V

Video throughput
- Gain ..... Unity
- Bandwidth ..... 250 MHz (-3dB)
- Frequency response ..... < ± 0.1dB to 30 MHz
- Differential phase error ..... 0.01°, 0 to 10 MHz
- Differential gain error ..... 0.01%, 0 to 10 MHz
- Crosstalk ..... -50dB @ 5 MHz
- Isolation..... +50dB @ 5 MHz

Video output
- Number/type/format ..... 1 RGBHV/RGBS/RGsB, or 1 S-video, or 1 composite video (NTSC/PAL)
- Connectors ..... 1 x 5 BNC female (RGBHV/RGBS/RGsB computer video)
  1 x 2 BNC female (S-video)
  1 x 1 BNC female (composite video)
- Nominal level ..... 1V p-p
- Impedance ..... 75 ohms
- Return loss ..... -38dB @ 5 MHz
- DC offset ..... ±5 mV maximum
- Switching type ..... Triple action (for RGB signals only)

Sync
- Input type ..... RGBHV, RGBS, RGsB
- Output type..... RGBHV, RGBS, RGsB
- Standards ..... TTL (RGB computer), NTSC and PAL (S-video and composite video)
- Input level ..... 0.5V to 5V p-p
- Output level ..... 0.5V to 5V p-p
- Input impedance ..... 75 ohms
- Output impedance ..... 75 ohms
- Max input voltage ..... 5V p-p
- Input sensitivity ..... 5V p-p
- Max. propagation delay ..... 20 nS
- Polarity..... Positive or negative (follows input)

SPECIFICATIONS (Cont.)

Audio input
- Number/type ..... 5 stereo, balanced/unbalanced
- Connectors ..... 1 3.5 mm mini jack, stereo, PC1
  4 3.5 mm captive screw terminals, 5 conductor
- Impedance ..... 25 kohms, balanced; 50 kohms, unbalanced
- Minimum level ..... -10dBu for full power out
- Maximum level ..... +20dBu, (balanced or unbalanced) @ stated %THD+N

Audio throughput
- Gain..... -78dB to +40dB
- Frequency response ..... ±0.05dB 20 Hz to 20 kHz
- THD + Noise ..... < 0.1% @ 1 kHz, at rated maximum output
- S/N ..... >95dB, 21dBu output
- Adjacent input crosstalk .... >80dB @1 kHz
- Stereo channel separation .. >90dB @1 kHz
- Total harmonic distortion .. 0.03%, worse case, @ 1 kHz at rated pre-amp drive
- CMRR ..... >75dB 20 Hz to 20 kHz

Audio output — pre-amp
- Number/type ..... 1 stereo, balanced/unbalanced
- Connectors ..... 1 3.5 mm captive screw terminal, 5 conductor
- Impedance ..... 50 ohms unbalanced, 100 ohms balanced
- Drive (HI-Z) ..... > +21dBu, balanced or unbalanced at stated %THD+N
- Drive (600 ohm) ..... > +15dBm, balanced or unbalanced at stated %THD+N

Audio output — power amp
- Number/Type ..... 1 stereo, 12 watts/channel
- Connectors ..... 2 captive terminals, L/R +/-, spring loaded
- Protection ..... Thermal, short circuit, open circuit, overload
- Drive (full power out) ..... 12 watts per channel, 8 ohm load

Control/Remote — switcher
- Serial control port ..... RS-232, 9-pin female D connector
- Baud rate and Protocol ..... 9600, 8-bit, 1 stop bit, no parity
- Pin configuration ..... Pin 2 = TX (RS-232)
  Pin 3 = RX (RS-232)
  Pin 5 = GND
- Extron remote key pad control .... 2 5 mm captive screw connectors, 5 conductor (auxiliary ports)
- IR controller module..... 30 kHz to 60 kHz input frequency compatibility
- Program control ..... Extron's control program for Windows®
  Extron's Simple Instruction Set - SIS™

SPECIFICATIONS (Cont.)

Control — room relay
- Number/type ..... 1 momentary or latching
- Connector ..... 1 3.5 mm captive screw connector, 5 conductor
- Contact rating ..... 24V, 1 amp

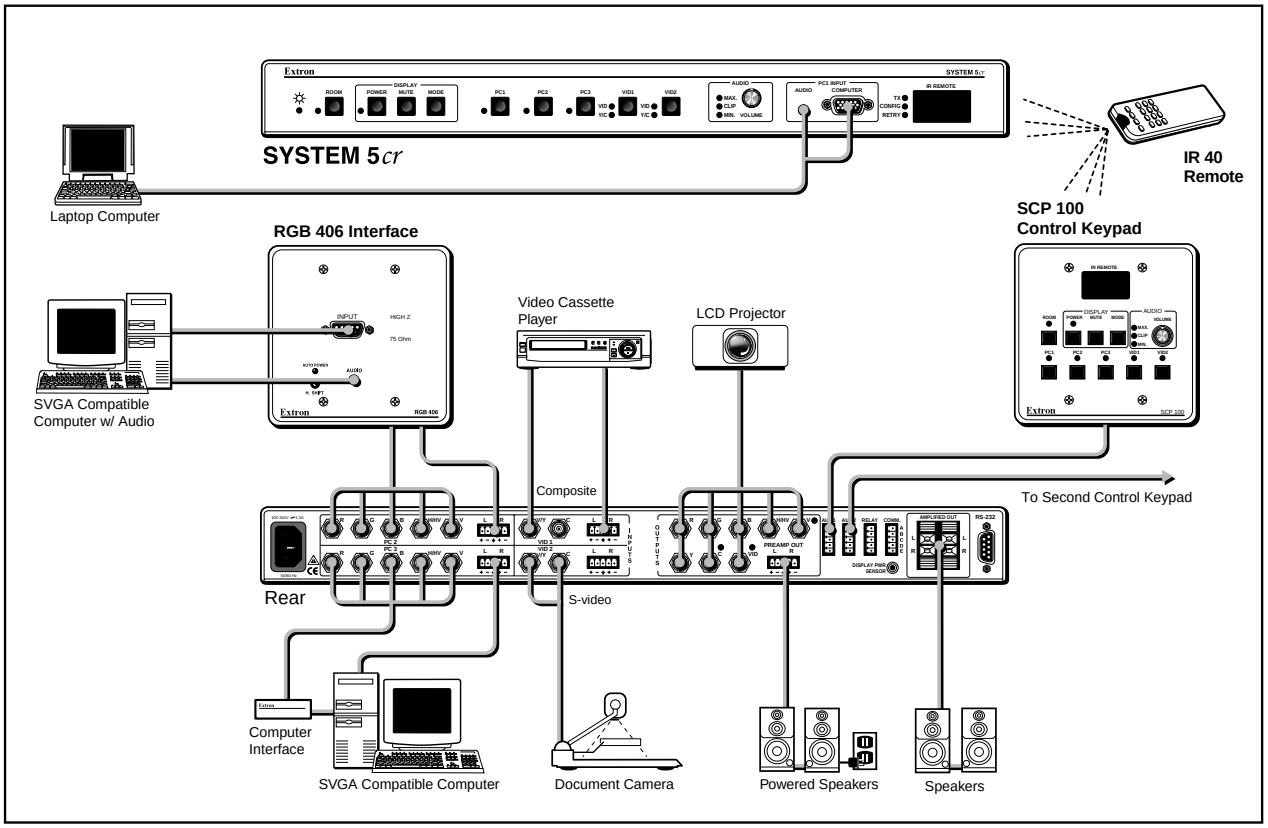
Control — projector
- Projector control port ..... 1 3.5 mm captive screw connector, 5 conductor

General
- Power ..... 100VAC to 240VAC, 50/60 Hz, 70 Watts, internal, auto-switchable
- Temperature/humidity
  - Storage ..... -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing
  - Operating ..... +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
- Rack mount ..... Yes, with included brackets
- Enclosure type ..... Metal
- Enclosure dimensions ..... 1.75" H x 17" W x 10.1" D 4.4 cm H x 43.2 cm W x 25.7 cm D
- Shipping weight ..... 10 lbs (4.5 kg)
- Vibration ..... NSTA 1A in carton (National Safe Transit Association)
- Approvals ..... UL, CUL, CE
- MTBF ..... 30,000 hours
- Warranty ..... 2 years parts and labor

OPTIONAL ACCESSORIES

- S-video-BNC adapter 26-353-01
- SCP 100, Grey 60-270-01
- SCP 100, Black 60-270-02
- SCP 100, White 60-270-03
- Display Power Sensor 60-271-01
- IR Broadcaster 60-272-02

APPLICATION DIAGRAM



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